

IN THE CLAIMS:

Please cancel Claims 3-17 without prejudice or disclaimer of the subject matter recited therein.

Please amend Claims 1, 2 and 18-22 and add new Claims 23-28 as follows.

1. (Currently Amended) A method of manufacturing a ~~mask~~ dot pattern, comprising the steps of:

preparing a structured material ~~comprising~~ composed of a plurality of columnar members ~~and a region containing a first component and a region containing a second component different from the first component~~ surrounding the columnar members, the structured material being formed by depositing the first component and the second component on a substrate;

removing the columnar members from the structured material to form a porous material having a columnar hole; ~~and~~

introducing a mask material into the columnar hole of the porous material to form a dot pattern; and

removing the porous material.

2. (Currently Amended) The method of manufacturing a ~~mask member~~ dot pattern according to claim 1, ~~wherein the columnar members of the structured material which are so formed as to contain a first material are surrounded by the region which is so formed as to~~

~~contain a second material, and~~ wherein the second ~~material~~ component is contained at a ratio of not less than 20 atomic% and not more than 70 atomic% with respect to the total amount of the first ~~material~~ component and the second ~~material~~ component.

Claims 3-17. (Cancelled).

3 ~~18.~~ (Currently Amended) A method of manufacturing a columnar structured material using a dot pattern manufactured by the method according to claim 1, and further comprising:

~~a step of preparing, on a substrate, a structured material in which columnar substances which are so formed as to contain a first component are dispersed in a member which is so formed as to contain a second component that can form a eutectic together with the first component;~~

~~a removal step of removing the columnar substances;~~

~~an introducing step of introducing a mask material into columnar holes of a porous material having the columnar holes obtained through the removal step;~~

~~a step of preparing dots made of the mask material by removing the member;~~

~~a step of etching the substrate with the dots~~ dot pattern as a mask; and

~~a step of removing the dots~~ dot pattern.

5 ~~19.~~ (Currently Amended) The method of manufacturing a ~~columnar~~
~~structured material~~ dot pattern according to claim ~~18~~ 1, wherein the ~~removal~~ removing step of
removing the columnar ~~substances~~ members is an etching step.

6 ~~20.~~ (Currently Amended) The method of manufacturing a ~~columnar~~
~~structured material~~ dot pattern according to claim ~~18~~ 1, wherein the introducing step of
introducing ~~a mask~~ the material into the holes is an electrodeposition step.

4 ~~21.~~ (Currently Amended) The method of manufacturing a columnar
structured material according to claim 18, wherein the step of etching the substrate with the ~~dots~~
dot pattern as a mask is a dry etching step.

7 ~~22.~~ (Currently Amended) The method of manufacturing a ~~mask member~~
dot pattern according to claim 1, wherein the ~~mask~~ material contains a noble metal.

8 ~~23.~~ (New) The method of manufacturing a dot pattern according to claim
1, wherein the first component and the second component form a eutectic system.

9 ~~24.~~ (New) The method of manufacturing a dot pattern according to claim
1, wherein the second component is contained at a ratio of not less than 30 atomic% and not

more than 60 atomic% with respect to the total amount of the first component and the second component.

¹⁰~~25~~. (New) The method of manufacturing a dot pattern according to claim 1, wherein the plurality of columnar members are crystalline aluminum columns.

¹¹~~26~~. (New) The method of manufacturing a dot pattern according to claim 1, wherein the region is composed of an amorphous $\text{Si}_x\text{Ge}_{1-x}$ ($0 < x < 1$).

¹²~~27~~. (New) The method of manufacturing a dot pattern according to claim 1, wherein the deposition of the first component and the second component is performed by a sputtering method.

¹³~~28~~. (New) A method of manufacturing a dot pattern, comprising the steps of:

preparing a structured material composed of a plurality of columnar members containing a first component and a region containing a second component different from the first component surrounding the columnar members, the structured material being formed by sputtering the first component and the second component on a substrate;

removing the columnar members from the structured material to form a porous material having a columnar hole;

introducing a material into the columnar hole portions of the porous material to form a dot pattern ;and
removing the porous material.